FISHERY MARKET NEWS

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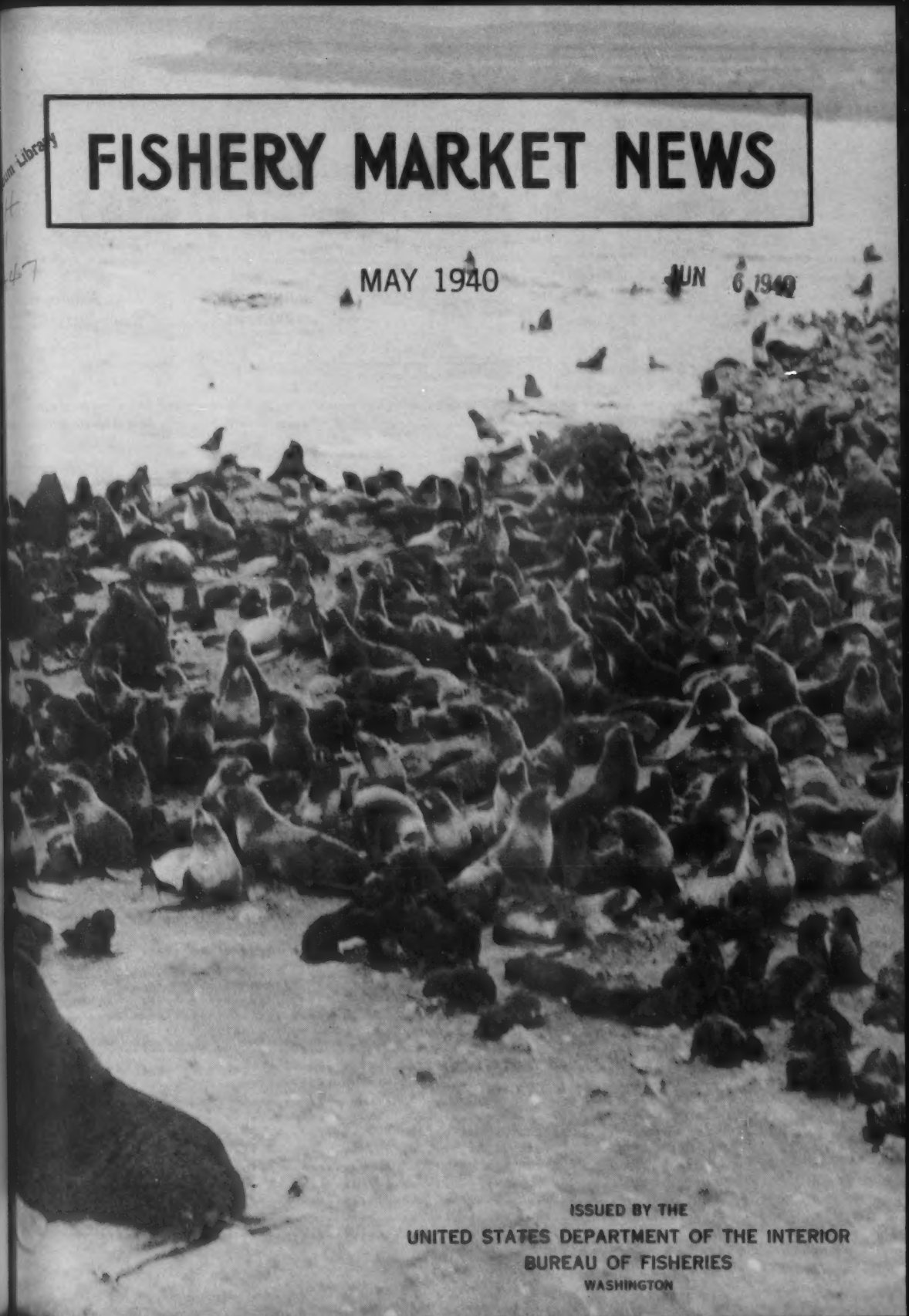

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UNITED STATES
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FISHERY MARKET NEWS

A REVIEW OF CONDITIONS AND TRENDS OF THE COMMERCIAL FISHERIES

May 1940 Washington, D. C. Vol. 2, No. 5

SUMMARY

Special Articles

Fur seals.--Management of the fur-seal herds of the Pribilof Islands by the United States through the Bureau of Fisheries has provided one of the outstanding accomplishments in the conservation of wild life. These resources have yielded to the Federal Treasury revenues more than twice the original price paid for the entire Territory of Alaska.

Fisheries of Virginia, 1939.--The summer croaker fishery in lower Chesapeake Bay has assumed increased importance in recent years. Efforts to rehabilitate the shad runs of Chesapeake Bay were intensified as two new hatcheries were established and a third was enlarged, and shad "tagging" was started.

Fresh Fish

Despite a substantial decrease in volume in March, vessel landings of fresh fish at the three New England ports registered an increase of 5 percent in value over March 1939. Fish worth $952,000 to the fishermen were landed.

Sales at the Boston Fish Pier averaged 4.36 cents per pound in March, a figure 29 percent higher than the March 1939 average price.

Boston Fish Pier sales covered over 18 million pounds of fish in March and the Chicago Wholesale Fish Market handled 5 million pounds of fishery products.

New York City fish receipts totaled over a quarter of a billion pounds in 1939. Flounders, hard clams, cod, and haddock were the leading items entering the New York market in that year.

Frozen Fish

Total cold-storage stocks of fish in the United States fell to less than 35 million pounds on April 15. Market News reports tending to indicate distribution of these stocks showed 3,700,000 pounds held in Boston on April 24; 5,200,000 pounds on hand in New York City on April 25; and 3,300,000 pounds held in Chicago on April 25. Five and one-half million pounds of fishery products were frozen in the month ending April 15.

Canned Fish

Unsold canned salmon in the hands of packers on April 30 amounted to 1,250,000 standard cases. The California sardine pack during the 1939-40 season totaled 3,135,000 cases, an increase of 22 percent as compared with the previous season. Tuna canned from January 1 through March 31 totaled 490,000 cases. The mackerel pack for the first three months of 1940 amounted to 345,000 cases, an increase of 136 percent as compared with the pack for the same period of 1939.

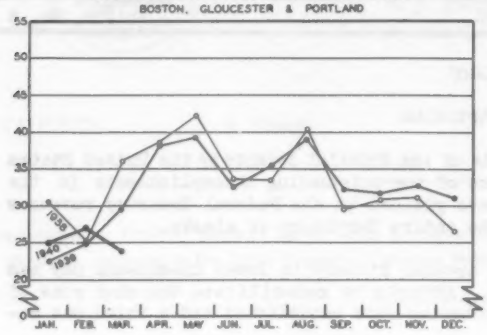
Foreign Trade

Foreign trade in fishery commodities suffered a marked drop in intensity in March, falling to a total volume of 33 million pounds from a high of 56 million pounds in February. Imports totaled 20,700,000 pounds, and exports, 12,300,000 pounds. Canned sardine exports for the first three months of 1939 totaled 31,638,000 pounds, compared with 16,130,000 pounds for the same period in 1939.

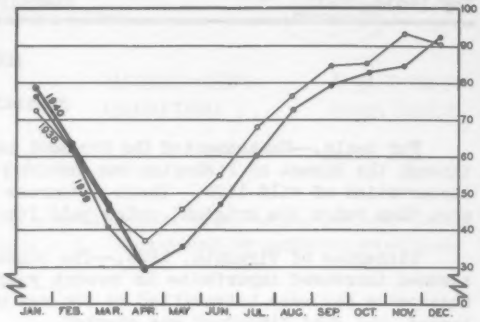
TRENDS OF FISHERY TRADE

IN MILLIONS OF POUNDS

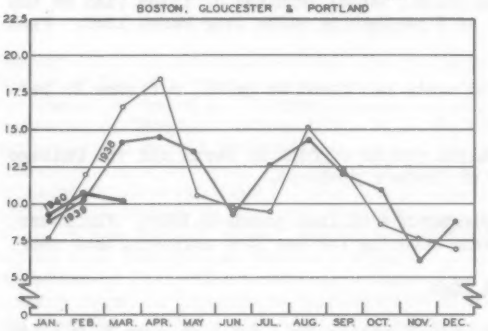
VESSEL LANDINGS, ALL FRESH FISH
BOSTON, GLOUCESTER & PORTLAND



DOMESTIC COLD-STORAGE HOLDINGS OF FROZEN FISH



VESSEL LANDINGS, FRESH HADDOCK
BOSTON, GLOUCESTER & PORTLAND



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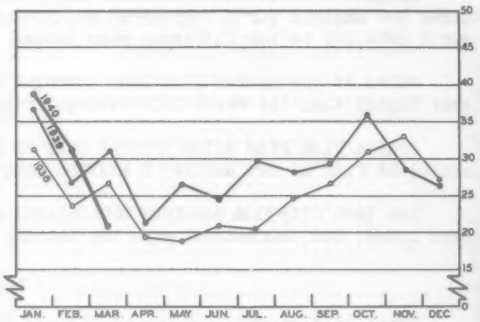
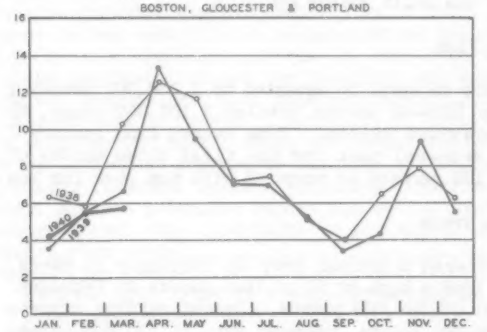
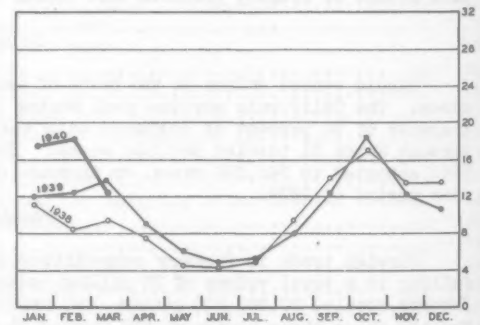


VESSEL LANDINGS, FRESH COD
BOSTON, GLOUCESTER & PORTLAND



EXPORTS OF EDIBLE FISHERY COMMODITIES



FUR SEALS

By Seton H. Thompson, Assistant Chief
Division of Alaska Fisheries

U. S. Bureau of Fisheries

A low treeless group of five islands near the center of Bering Sea constitutes the only terrestrial home of the North American fur-seal herd. Fog-enshrouded, these uninhabitated volcanic islands were discovered by accident in 1786 by Geressim Pribilof, a Russian navigator, who immediately recognized the potential wealth in their fur resources. It is estimated that at the time of discovery the herd contained at least 5,000,000 fur seals, and sea otters, sea lions, and walruses were also abundant.

The Russians, making no provision for perpetuation of the herds, began to slaughter these sea animals without discrimination as to size or sex. In the 50 years immediately following discovery of the islands about two million fur seals were killed. If any sea otters survived this early period of destruction, they moved to more isolated areas, as none of these valuable fur-bearers has been seen on the Pribilofs since 1840.

By 1835 the Russian management had grown apprehensive as to the future of the fur-seal herd, and in consequence imposed restrictions on shore killings at the Pribilofs. Fortunately, these restrictions came soon enough and the herd responded to the more favorable conditions In 1867, when the Pribilof Islands were acquired by the United States in the Alaska purchase there were about three million fur seals in the herd.

During the first 40 years of ownership by this Government, the Pribilofs were leased to private companies and more than 2,300,000 fur-seal skins were taken for which about $9,500,000 was paid into the United States Treasury. The strain of these operations, coupled with unknown toll of the pelagic or ocean sealing fleet numbering as many as 100 vessels, was severe, and by 1911 the herd had been reduced to commercial extinction; only about 125,000 animals remained.

Sealing on land could be controlled for there the animals to be killed could be selected with respect to sex and age. At sea, on the other hand, all animals were targets for the guns of the pelagic sealers. The result was the loss of many injured animals, and many that were killed outright sank before they could be reached. In all cases the killing of female seals at sea meant the destruction of an unborn pup or of a pup left on shore to starve.

Pelagic sealing was an extremely wasteful process, but it was carried on in waters beyond the control of our Government, and nothing could be done about it. Japanese and Canadian vessels joined the American sealing fleet in waters off the California coast in the spring, following the herd north to Bering Sea where they continued to operate until fall; then they pursued the survivors south. Under cover of the fog, the pelagic sealers interrupted their offshore operations with occasional raids on the island rookeries.

The actual extinction of the Alaska fur seal could not have been avoided had the methods of this period continued, and today, instead of a revenue-yielding resource, our fur seals would be mere objects of museum interest. Far-sighted conservationists of the United States, Great Britain, Japan, and Russia, aware of the destructive effect of pelagic sealing, urged international cooperation to prevent it. The result was the fur seal treaty of 1911. Today the Alaska herd has a protective escort of Coast Guard cutters where 30 years ago its convoy of 100 pelagic sealing vessels was one of destruction.

The international cooperation afforded by the treaty has resulted in the most outstanding of all accomplishments in the conservation of wild life. Since 1911 the herd has steadily increased until today it numbers more than 2,000,000 animals. This almost phenomenal growth has been possible only through careful management, taking into consideration all phases of the seal's natural history. Were it not for the polygamous nature of fur seals, the birth of both sexes in equal proportions, and the early maturity of the females, the herd would still be of almost insignificant size.

The hardy old males or "bulls" are the first to arrive at the islands in the spring, often hauling out on shore before the snow has disappeared. Each selects his summer home at a place along the shore where he may induce the greatest number of females or "cows" to join him. The younger, less experienced bulls are forced to take up their places at less advantageous points along the shore and consequently they acquire for their harems fewer cows. A family group or harem may comprise as many as 70 cows to one bull. Once a cow has joined the group there can be no amiable separation, and any move toward desertion ends in physical admonition for the wayward wife and scars and bruises for the covetous neighbor who tried to lure her into his harem. Nor are immature animals, except the new-born pups, allowed to intrude where the harems are established. The bulls see to that by keeping a constant vigil, unbroken even to obtain food or sleep.

Because of the polygamous habits of the fur seal and the fact that the sexes are in equal numbers at birth, there are many males unneeded to maintain the herd and provide for its continued growth. Instead of permitting the normal increase of male animals, therefore, this sex is maintained at the most desirable ratio by killing the surplus males for their fur. The fur is most desirable on the 3-year-olds, and from the males of this age group known as "bachelors", come the fur-seal coats of the world. The bachelors very considerately segregate themselves from other seals on shore, and the job of killing the right animals is thus made easy. A proper number of the more fortunate 3-year-old males are marked and reserved from killing to be future harem-masters. No female is ever purposely killed.

To carry on sealing at the Pribilofs in the early days the Russian operators established colonies of natives from the Aleutian Islands on St. George and St. Paul Islands where the principal rookeries exist. The descendants of these people, numbering about 450, still live at the Pribilofs and carry on the sealing operations under the direction and supervision of employees of the Bureau of Fisheries. In return for this work they receive all of the necessities of life including food, clothing, shelter, school facilities, and medical attention; and, in addition, cash payments are made to them for each skin taken.

Most of the skins are taken in July, and after preliminary preparation at the islands, they are shipped to a Government-supervised factory in St. Louis where they are dressed, dyed, machined, and finished for sale at public auction to the highest bidder. The process of preparing fur-seal skins for market is a difficult one requiring at least three months for each skin. At the end of the process the leather side of the skin has the same soft feel that one associates with the finest type of chamois glove, and the soft, lustrous fur has become unequalled for beauty and durability.

The United States paid $7,200,000 for the 586,000 square miles in the Territory of Alaska, or an average of about $12.30 per square mile. On this basis the 175 square miles of land constituting the Pribilofs cost the Government less than $2,500. In 73 years of ownership these islands have yielded revenues to the Federal Treasury amounting to more than $16,000,000, a return of more than 6,000 to 1 on the original investment. Moreover, the source of the revenue, instead of dwindling, is self-perpetuating and, in fact, is steadily increasing.

FISHERIES OF VIRGINIA DURING 1939

By L. S. Christey, Statistical and Marketing Agent
Division of Fishery Industries

U. S. Bureau of Fisheries

A general trend in the fisheries of Virginia has been the increasing importance of the summer croaker fishery. The decline both in value and abundance of shad appears to have hastened this development. More and more of the fishermen in the lower Chesapeake Bay are going into the croaker fishery, and those already in it are operating on a continually increasing scale.

Croakers were plentiful during 1939, with an unusually heavy run the last two weeks in July swamping the pound net crews of lower Mathews County. The bulk of the catch sold at an average of 1 cent per pound.

The shad catch during the spring of 1939 was larger than that of 1938, while prices suffered a decrease. The three successive years of increased abundance on the Hudson River have apparently depressed the Chesapeake Bay market, particularly during the latter part of the season when the competition is direct. At one time prices reached a low point of 3 cents per pound for roes and 1 cent per pound for bucks. The season's operations also contributed a change in the distribution of the catch. Up-river gill nets accounted for most of the increase over the volume obtained in 1938. Some pound net operators claimed smaller catches than in the previous year.

The Virginia Commission of Fisheries has been actively interesting itself in propagation work. Two new hatcheries were established in 1939: one on the Mattaponi River and one on the Pamunky River (both tributaries of the York River). In addition, the facilities of the Chickahominy River hatchery were enlarged and the State cooperated with the Federal hatchery at Fort Belvoir in hatching Potomac River shad. In all, about 35 million shad were hatched. Some 150 thousand were held to fingerling size and released in the fall of 1939. The Federal Bureau of Fisheries also "tagged" some four hundred spawning migrants in part of its cooperative contributions toward rehabilitation of the Chesapeake shad. Preliminary results showed over 60 percent recovery of the "tags".

Both in Virginia and Maryland there was evident a decrease in average weight of the shad.

The early run of menhaden was disappointing, lagging behind 1938's low catch. Fishing improved greatly in September and October, however, so that the total catch was well above that for 1938. Installation of gas engines in the purse boats, begun in 1938, was practically completed in 1939. This has resulted in a slight reduction in the crews and the employment of longer nets.

River herring (alewives) decreased at least 15 percent below the 1938 level. The early run was negligible and there was a steady run late in the season. Very little canned herring was packed in 1939 and there was a large increase in the percentage destined for pickling. Most of the Virginia pack is brought only to an intermediate stage in processes administered in the State. Usually the herring are packed in a vinegar and salt brine and shipped to Chicago for further curing and spicing.

The bluefish does not normally provide a large percentage of the Chesapeake Bay catch, but its high unit value makes it a desired species. Moreover, it is one of the most popular sport fish. The run in 1939 was regarded as a complete failure. It has been questioned whether there were a hundred blues caught on hook and line in the whole of Chesapeake Bay, and pound net crews which normally take up to 1,000 pounds of bluefish per year reported only one or two fish caught during 1939.

The catch of spot was probably 15 to 20 percent under that of 1938.

The dominant year class of Spanish mackerel which entered the fishery in 1937 had virtually disappeared by 1939. Catches of this species were light with prices ranging from 8 to 12 cents per pound.

Landings of striped bass were lighter in 1939 than for several years with the striking exception of the catch by stake gill nets in the Potomac River. Some combination of circumstances left striped bass in unprecedented numbers in the gill nets of these fishermen. Seasonal catches ranged from 30,000 to 60,000 pounds for individual crews. Some increase was apparent also in the upper Rapahannock River, but the catch in the other rivers and the Bay proper was much lower than in 1938.

The utilization of swell-toads is increasing rapidly. Although this unprepossessing fish is usually scorned by tide-water residents, it sells well in the interior where it is known only in the skinned and headed condition. Then it somewhat resembles a large frog leg and is often sold as a "sea-frog".

The May run of soft crabs was probably one of the heaviest runs since the Chesapeake soft crab fishery became established. At this time an increase in power scraping in the Tangier Sound area in both Virginia and Maryland resulted in a glut of "peelers" which demoralized the soft crab market. During the balance of the summer high prices prevailed because only small supplies were available.

Landings of hard crabs were small, as they have been for several years. This appeared to be due more to a poor market for crab meat than to a scarcity of supply. Many of the picking houses ran on a part-time basis because of the lack of a profitable market.

Curiously, after all the years crabs have been taken in Chesapeake Bay, two new devices have gained wide favor during the past two years. One of these is the "crab pot". This device is shaped somewhat like the usual eel or catfish pot. It is sufficiently unique to allow the inventor to patent it and he is collecting royalties on its use. Essentially, this is a cubical wire box composed of metal frame covered with galvanized chicken wire. Crabs enter through an aperture near the bottom of any side, being attracted to the conical bait chamber in the center. The crabs are deflected through a funnel surrounding the bait chamber. From this funnel they can neither escape nor consume the bait. This device is used primarily for hard crabs, usually in relatively deep water. It is frequently employed by pound net fishermen, several pots being set near each pound-head where crabs are naturally attracted by the presence of fish. The pots are lifted with a minimum expenditure of effort when the pound net is fished.

The second device is known variously as the "crab-pound", "crab-fyke", or "peeler-trap". It was developed on the Piankatank River where it has been widely adopted and has spread to the Rappahannock, Great and Little Wicomico and Yeocomico Rivers. This device is essentially a miniature pound net with a covered head. Typically, it is set with a 50- to 75-foot lead from high tide mark to a depth of about 4 feet. It is fished primarily for peeler crabs and the presence of hard crabs lessens its efficiency because of their wounding the peelers. In a suitable location these devices can be tremendously productive. Catches of from 500 to 600 peelers per tide is not unusual for one trap during the spring and fall migrations. An objection to this gear is the high mortality rate of the crabs obtained.

Military activity has been providing work for fishermen in the area adjacent to Hampton Roads, lessening the number of operating oystermen. It is estimated that not over half as many men have been licensed to take oysters in the James River seed fishery as were licensed in the 1938-39 season.

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WHOLESALE AND RETAIL PRICES

Advances in the prices of foods and farm products caused the weekly index of wholesale commodity prices for the week ending April 27 to rise to 79.0 percent of the 1926 average, according to the Bureau of Labor Statistics. This was a rise of 1.4 percent from the index of the week ending March 30, and 3.8 percent from that of the last week of April 1939. The index for foods was 72.8, representing an increase of 4.3 percent above the index of four weeks previous and 6.1 percent higher than the April 29, 1939, figure.

Changes in retail prices are also reported by the Bureau of Labor Statistics. Between March 12 and April 16 the retail cost of food increased 1.4 percent. In 46 of the 51 cities

covered in the studies increases were reported, and 21 foods showed higher prices, 21 showed no change, and 20 showed lower prices.

The retail all-foods index on April 16 was 78.2 percent of the 1923-25 average. On March 12, 1940, the index stood at 77.1 percent, and on April 18, 1939, at 76.6 percent of that average. Pink salmon retailed at an average of 15.5 cents per 16-ounce can on April 16, 1940, a figure 1.3 percent higher than the price of March 12 and 23.9 percent larger than that of April 18, 1939. Red salmon prices averaged 25.6 cents, larger by 0.8 percent than the average of March 12, and 11.7 percent higher than the April 18, 1939, figure.

FISHERMEN URGED TO WATCH FOR DISTRESS SIGNALS

The Hydrographic Office of the United States Navy has requested the Bureau of Fisheries to assist in an attempt to notify fishermen of the distress signals used by submarines in the United States Navy. This request has been prompted by the circumstances of the Squalus disaster when distress smoke signals were observed by fishermen but were regarded as inconsequential.

"A submarine of the United States Navy which may be in need of assistance releases a red smoke bomb.

"A submarine which may be compelled to surface in the vicinity of surface craft releases a yellow smoke bomb. Surface vessels should keep clear of the yellow smoke bombs.

"Any person sighting a red smoke bomb rising from the surface of the water should report the time and location immediately to the nearest Naval authority or Coast Guard unit."

It is desired that this information be given distribution as wide as possible among coast fishermen.

PILCHARD STUDIES CONTINUE

Oceanographic studies of the life history of the pilchard will be resumed aboard the vessel E. W. Scripps of the Scripps Institute of Oceanography in a cooperative study program carried on by personnel of the Bureau of Fisheries and the Institute. The Bureau, represented by O. E. Sette, In Charge of the South Pacific Fishery Investigations, will estimate the volume of spawning and survival of the young of the pilchard. At the same time the Scripps Institute of Oceanography, directed by Dr. H. U. Sverdrup, will study ocean currents and microscopic sea life, in continuation of an investigation begun three years ago in the waters of the California coast.

The Bureau's studies are part of an investigation to determine the effect of the extensive pilchard fisheries. These commercial operations have recently increased because of extensive demand in Europe for canned pilchards.

Pilchard eggs, which are scarcely larger than a pin head, are cast into the open sea during the act of spawning and thereafter drift freely in the water until the young fish hatch. The eggs and young fish are captured in plankton nets, which consist of bolting silk. These nets are towed through the surface waters and in vertical hauls, providing a system of quantitative sampling which captures all specimens within a measured volume of water. The sampling processes thus allow the determination of approximate figures for the total number of eggs produced in the areas explored. These determinations, combined with facts obtained through other studies, are utilized as indices in planning the management of the pilchard resources.

SMALL FLEET STARTS IN MACKEREL FISHERY

With but 14 Gloucester vessels (7 purse seine, and 7 drift gill net) reported in waters off southern New Jersey late in April, the 1940 offshore mackerel fishery has begun with one of the smallest fleets in many years, according to a report submitted by J. R. Webster,

Assistant Aquatic Biologist, Division of Scientific Inquiry, at Cambridge, Mass. In what might be considered a normal beginning, the fleet would comprise 30 or more seiners and a dozen or more netters at this date.

From reports received at Boston, mackerel landings by the fleet to date amount to about 250,000 pounds. This figure is considerably greater than at a corresponding date last year but less than half of the production by April 20 in 1938. Samples of shipments arriving at Boston indicate the mackerel are mostly small, averaging around 3/4 pound, probably the same group of fish which showed up in such unexpectedly large numbers last September from Massachusetts and Cape Cod Bays.

An observer has been stationed at Cape May, N. J., to begin the usual collection of data on the composition of the catch of mackerel, locality of capture, and other information obtained each year at the principal mackerel ports.

In the Cambridge laboratory the index of mackerel availability has just been completed for recent years in accordance with methods previously established. Based on catch per unit of effort, this index measures the relative availability of mackerel from year to year and is believed to be roughly indicative of changes in abundance. According to this index, mackerel abundance in 1937 was about 22 percent of 1926, the greatest decline observed in 10 years, while the abundance in 1938 was 356 percent of that in 1937, the greatest increase yet recorded. Abundance in 1939 was about 59 percent of that of 1938. It is interesting to note that the relative decline in total landings of mackerel by seiners from 1938 to 1939 was very close to the decrease in relative abundance as measured by catch per unit of effort by this type of gear.

VALUE OF NEW ENGLAND VESSEL LANDINGS INCREASES

The March vessel landings of fish at Boston and Gloucester, Mass., and Portland, Maine, decreased by almost one-fifth from the March 1939 total. Despite this decrease in volume, the value of the landings to the fishermen showed a 5 percent increase. Fishery products totaling 24,090,000 pounds, valued at $952,000, were landed in March of this year by fishing craft of five net tons capacity and over. Fisheries Statistical Bulletin No. 1377 outlines in detail these receipts. Leading items during the month were haddock, 10,158,000 pounds, valued at $477,000; cod, 5,700,000 pounds, valued at $243,000; rosefish, 4,464,000 pounds, valued at $65,000; flounders, 1,829,000 pounds, valued at $76,000; and pollock, 1,132,000 pounds, valued at $39,000. Rosefish constituted the only item showing an increase in volume as compared with the March 1939 totals.

For the first three months of 1940 the total landings were 76,230,000 pounds, valued at $2,688,000, representing a 1 percent decrease in volume and an 18 percent increase in value over the corresponding figures for March 1939. The leading item in these totals was haddock, contributing 29,891,000 pounds, valued at $1,277,000. Other species, in order of value, included cod, 15,209,000 pounds, worth $628,000; rosefish, 16,752,000 pounds, valued at $246,000; flounders, 5,817,000 pounds, valued at $218,000; and pollock, 5,467,000 pounds, valued at $145,000.

BOSTON FISH PIER PRICES CONTINUE CLIMB

Fish landed at the Boston Fish Pier during the month of March averaged 4.36 cents per pound, 15 percent higher than the average price of a month previous and 29 percent higher than that of the year before. This average price was compiled by the Boston office of the Fishery Market News Service for the total of 18,417,000 pounds of fish landed during the month. The total landings were considerably smaller than those of the previous month, when 21,780,000 pounds were brought in, and those of March 1939, when 26,003,000 pounds were received. Totals from 430 fares were included in the landings for which $803,000 was paid to the fishermen.

Inshore waters contributed 1,844,000 pounds or 10 percent of the landings. Of this total, flounders furnished 45 percent, rosefish provided 27 percent, and cod contributed 20 percent. Receipts of offshore species--16,574,000 pounds, or 90 percent of the total landings--contained 55 percent haddock and 28 percent cod. Offshore fares recorded totaled 160 and those from inshore waters totaled 270.

A comparison of the March receipts for three years discloses that the decrease in volume landed during the most recent of these periods has not resulted in a conspicuous decrease in dollars paid to the fishermen. The landings of 29,671,000 pounds in March 1938 had a total value of $789,000; those of March 1939, 26,003,000 pounds, had a value of $822,000; and those of March 1940 resulted in payments totaling $803,000. The average price per pound paid to the fisherman was 2.66 cents in 1938, 3.16 cents in 1939, and 4.36 cents in 1940.

FISHERIES OF CONNECTICUT

Developments in fishing activities in the State of Connecticut for the first few months of 1940 indicate that the year's catch will probably be somewhat lower than that of 1939. This tendency is expected to be shown through virtually all fishery activities. One factor contributing to the decline of these activities has been the employment of a considerable number of fishermen in expanding aircraft and shipbuilding industries.

Flounders.--The catch of yellowtails and blackbacks has been encouraging to date this season, owing largely to favorable prices being offered for these species.

OYSTERS FIRST IN IMPORTANCE IN FISHERIES OF MIDDLE ATLANTIC STATES

The yield of oysters from the waters in the Middle Atlantic States in 1938 furnished 33 percent of the total value of the fisheries of that region. The total commercial catch of fish and shellfish in these States in 1938 amounted to 216,859,000 pounds, valued at $8,249,000. This is a decrease of 18 percent in volume but an increase of 4 percent in value as compared with the catch in 1937.

Based on the value to the fishermen, by far the most important product was oysters. The yield of oyster meats totaled 16,144,000 pounds, valued at $2,696,000. Flounders valued at $804,000, hard clams worth $773,000, cod worth $469,000, and haddock worth $414,000 followed in order of importance to the fishermen. Menhaden furnished 40 percent of the weight of the total production and contributed $340,000 to the total value.

The catch in New York waters amounted to 91,217,000 pounds, valued at $5,193,000; New Jersey, 108,095,000 pounds, valued at $2,908,000; Pennsylvania, 40,000 pounds, valued at $4,000; and Delaware, 17,507,000 pounds, valued at $144,000.

These fisheries gave direct employment to 13,983 persons in 1938. They consisted of 7,549 fishermen, 6,196 in wholesale and manufacturing establishments, and 238 on transporting craft. There were 14,690 persons employed in these fisheries in 1937. In 1938 there were 383 fishery wholesale and manufacturing establishments in the producing areas of the four States; aggregate salaries and wages paid in these establishments amounted to $7,413,000; and manufactured fishery products (canned, cured, packaged, and byproducts) were valued at $15,436,000.

NEW YORK CITY FISH RECEIPTS TOTALED QUARTER BILLION POUNDS IN 1939

The annual summary of the fishery products received at New York City during 1939 has recently been completed by the New York office of the Bureau's Fishery Market News Service. This summary shows that during 1939 over 261 million pounds of fresh and frozen fishery products were received in New York City. Wholesale dealers in fish and shellfish on the Salt-water Market reported to the Market News Service receipts totaling 228,293,000 pounds, including incomplete data from filleting and hotel supply firms. Imports received by steamship and entered at New York City amounted to 7,711,000 pounds. Detailed records covering the volume of fresh-water fishery products received at Peck Slip are not available but it is estimated that these receipts totaled about 25,000,000 pounds.

Of the fishery products received at the Salt-water Market, 219,607,000 pounds, or 96 percent, were shipped from 27 States and Alaska. The remaining 4 percent was received from 6 Provinces of Canada and Newfoundland.

Fifty-four percent, or 122,867,000 pounds, was transported to the Salt-water Market by truck. Over 21 percent came by freight, 18 percent was landed by fishing craft, 6 percent arrived by express, and less than one-half of one percent by coastwise vessels. Domestic shipments were distributed almost exactly in the same manner as the total shipments. The fishery products from Canada and Newfoundland, however, arrived almost exclusively by rail, freight shipments constituting 55 percent and express, 44 percent.

Salt-water fish constituted 159,332,000 pounds, or 70 percent of the total fishery products received on the Salt-water Market. Slightly less than one-half of this volume arrived by truck, the remainder being about equally divided between freight and fishing craft landings. Receipts of fresh-water species at the Salt-water Market were negligible, the largest part of which arrived by express. Shellfish and miscellaneous fishery products accounted for the remaining 68,582,000 pounds, or about 30 percent of the Salt-water Market receipts, and four-fifths of the arrivals of these items came to New York by truck.

Of the salt-water fish, flounders, including blackbacks, dabs, gray sole, fluke, lemon sole, and yellowtails, were received in the greatest volume--39,197,000 pounds, or 25 percent. One-half of this was shipped by truck and one-third by freight. Cod, with 20,186,000 pounds or 13 percent, followed, the bulk by freight. Next in order were haddock, 9 percent, mainly fishing craft landings; mackerel, 7 percent, mostly truck receipts; and butterfish and scup, each 6 percent, largely truck receipts and fishing craft landings.

Hard clams in the shell totaling 23,589,000 pounds formed 34 percent of the shellfish and miscellaneous products. Practically all the clams were transported by truck. The next most important shellfish items were shrimp, 22 percent, the bulk arriving by truck; and oysters in the shell, 13 percent, almost entirely shipped by truck.

Carp was the most important species in the very small amount of fresh-water fish reported on the Salt-water Market. Carp was received mainly by express.

Massachusetts with 57,381,000 pounds, or 25 percent, was the shipper of the greatest volume of fishery products from a single geographical area, well over one-half being shipped by freight and most of the balance by truck. The State of New York was the next largest supplier, its shipments, practically all by truck, amounting to 22 percent. The third largest supplies were furnished direct at the Salt-water Market by fishing craft, these constituting 18 percent of the total receipts. Other sources included New Jersey with 7 percent; Florida, 4 percent; and Connecticut and North Carolina, each 3 percent.

Of the 7,711,000 pounds of imported fishery products received by steamship and entered at New York City, 3,914,000 pounds, or 51 percent, was classified as fish and the remainder as shellfish and miscellaneous products. Sixty-one percent of the fish was composed of frozen swordfish, all from Japan. Frozen sturgeon with 8 percent, mostly from Russia, and frozen smelt with 7 percent, largely from Newfoundland, were the next most important items.

Of the shellfish and miscellaneous fishery products, frozen spiny lobster tails, almost exclusively from the Union of South Africa, accounted for 37 percent. Next in importance were snails with 20 percent, mainly from Morocco, and frozen pulpi, mostly from Portugal, with 15 percent.

Japan supplied 2,801,000 pounds or 36 percent of all the imports, about 90 percent of Japan's shipments being frozen swordfish. Imports from Portugal accounted for 10 percent, mostly frozen pulpi and sepia. Morocco sent 9 percent, all snails; and Russia, 7 percent, largely frozen sturgeon and salmon.

VIRGINIA ATTEMPTS TO TRACE SHAD MIGRATIONS

A release from the Virginia Commission of Fisheries announces that fisheries biologists employed by the State of Virginia have completed the tagging of 800 adult shad in an effort to determine migration and reproduction habits of this fish. With the assistance of the Division of Scientific Inquiry of the Bureau of Fisheries, these men purchased live fish from commercial pound netters in Chesapeake Bay and released the fish after securely attaching identification tags. Seventy reports of recoveries of fish tagged previous to April 3 have already been reported. An analysis of the results of these operations will be made at the end of the shad season.

FISHERIES OF FLORIDA

King mackerel.--The only reliable source of king mackerel along the Florida coast is in the vicinity of Key West. Trollers in this area have been landing from 1,500 to 2,500 pounds per day, most of which has been shipped to northern markets. At the present time the appearance of Boston mackerel in these markets is reported to have lowered demand for king mackerel. The decrease in demand has caused a temporary reduction in the operations in this fishery.

Sunfish and crappie.--Commercial fishing for sunfish and crappie in Lake Okeechobee was very productive during the early months of 1940. This lake was raised to approximately a 17-foot level about a year ago, and the resulting changes have apparently facilitated growth of these species. The increase in production is estimated at 40 percent over the yield of this lake for corresponding months in 1939.

Spiny lobster.--The 1939-40 season for the taking of spiny lobster in Florida has ended after a period of disappointing production. It is estimated that the production of spiny lobster has involved a reduction of approximately 50 percent as compared with the previous season. This reduction in the catch is ascribed to a depletion in the supplies of spiny lobsters. Florida dealers are now obtaining spiny lobster from Cuba to meet local demands.

Stone crabs.--Fishing for stone crabs has been virtually discontinued as a result of scarcity of this species. Local requirements for this crustacean also are filled by shipments from Cuba.

Sponges.--Sponge fishermen in Key West, Fla., are reporting that the condition of the sponge appears to be returning to normal. A scarcity of sponges has been experienced during the past two years, owing to a parasitic infection which has attacked a large percentage of the sponges. The yellow and grass varieties proved especially susceptible to this infection. The markets for sponges have been affected by the scarcity, with high prices resulting.

GREAT LAKES STATES PRODUCE FISH WORTH SIX MILLION DOLLARS IN 1938

According to Fisheries Statistical Bulletin No. 1375, the yield of the commercial fisheries of the Lake States, including the international lakes of northern Minnesota, during 1938 amounted to 81,524,000 pounds, valued at $6,083,000. This compares with a catch of 83,958,000 pounds of fish, valued at $6,033,000, caught the previous year. The contributions by species, in order of value, were led by lake trout, the catch of which amounted to 9,360,000 pounds and was valued at $1,497,000 to the fishermen. Following were chubs, 5,852,000 pounds, valued at $703,000; whitefish, 3,456,000 pounds, valued at $674,000; lake herring, 20,523,000 pounds, valued at $635,000; yellow pike, 8,017,000 pounds, valued at $602,000; and blue pike, 8,718,000 pounds, valued at $594,000.

In 1938, Michigan led all other Lake States in volume and value of fish taken, having a catch of 28,838,000 pounds, valued at $2,265,000. Ohio ranked second with 22,040,000 pounds, valued at $1,503,000; and Wisconsin was third with 15,475,000 pounds, valued at $1,324,000.

Lake Michigan's catch in 1938 totaled $2,294,000 in value. That of Lake Erie was next in importance, with a value of $1,981,000. Lake Superior contributed a catch valued at $875,000 and Lake Huron, a catch valued at $760,000. The international lakes provided $119,000 worth of fish and Lake Ontario contributed fish valued at $54,000. Lake Michigan's catch accounted for 38 percent of the total value of the Great Lakes fisheries in 1938 and included $850,000 worth of lake trout and $653,000 worth of chubs. Lake Erie's total included $590,000 worth of blue pike and $410,000 worth of yellow perch. Lake trout also furnished the major portion of the Lake Superior value, $453,000 being received for the catch of this species by fishermen operating in Lake Superior.

There were 9,778 persons employed in these fisheries in 1938, consisting of 6,976 fishermen, 2,772 persons in wholesale and manufacturing establishments, and 30 on transporting craft.

Manufactured fishery products (canned, cured, packaged, and byproducts) were valued at $3,561,000.

SAUGER MOST IMPORTANT IN CHICAGO RECEIPTS

Seventy classifications of seafood providing 5,039,000 pounds were received in the Chicago Wholesale Fish Market during March, according to the monthly summary issued by the Chicago Fishery Market News office. This represents a decrease of 3 percent from the total of fresh and frozen products received during February and an increase of 19 percent over the March 1939 total. Of the March 1940 figure, 3,087,000 pounds were fresh-water fish; 1,214,000 pounds were salt-water fish; and 738,000 pounds were shellfish, etc. Among the species contributing to the total, sauger with 972,000 pounds assumed primary importance, replacing halibut which was first in the February totals. Shrimp receipts increased to take second place with 500,000 pounds, and following were halibut with 478,000 pounds; smelt, 432,000 pounds; whitefish, 405,000 pounds; lake trout, 337,000 pounds; and rosefish fillets, 333,000 pounds. The largest changes from previous figures were reflected in the receipts of sauger, which totaled 1,205,000 pounds in March 1939 and 640,000 pounds in February 1940; and in whitefish stocks, which were 313,000 pounds in March 1939 and 692,000 pounds in February 1940. Shrimp stocks increased from 113,000 pounds the previous year and from 189,000 pounds the month before. Canadian contributions to the total included 970,000 pounds of sauger from Manitoba, 341,000 pounds of whitefish from Alberta and Saskatchewan, and 117,000 pounds of halibut from British Columbia. Also shipped from British Columbia were 334,000 pounds of halibut caught by United States fishermen and shipped in bond. Michigan accounted for 207,000 pounds of lake trout; Wisconsin produced 123,000 pounds of a total of 244,000 pounds of lake herring received; and Louisiana contributed 441,000 pounds of shrimp.

Railway freight carried 45 percent of the products received; trucks transported 37 percent; and express facilities carried 18 percent. The March receipts included contributions from 27 States, Alaska, and 7 Provinces of Canada.

BRITISH COLUMBIA COOPERATIVES ACTIVE IN 1939

A statement published in the Canadian Fisherman for April 1940 outlines the annual operations of the Prince Rupert Fishermen's Cooperative Association and the North Island Trollers' Cooperative during 1939. Seven stores managed by these companies handled business totaling $127,000 during the year. Two gasoline stations handling products for the fishermen sold almost $25,000 worth of products. The North Island Cooperative produced 1,514,000 pounds of all classes of fish, and the Prince Rupert organization sold 1,104,000 pounds of similar commodities. These fish were sold at auction to various dealers on the Pacific coast.

The associations operate a mild-cure plant and also freeze a small percentage of the fish handled. Their combined membership is listed at 480 fishermen.

GREAT BRITAIN ESTABLISHES MAXIMUM PRICES FOR CANNED SALMON

Under orders enforced by the Ministry of Food, Great Britain has placed into effect a schedule of maximum prices for all varieties of canned salmon. No person may sell or offer for sale, or buy or agree to buy any canned salmon in the United Kingdom at any price exceeding the established or control price. Every person who sells canned salmon by retail must keep posted in a conspicuous place his current prices for this product. A detailed report of these regulations has been published in the April 13 issue of the Canadian Commercial Intelligence Journal. Additional control has been provided for sales of other canned fish, including herrings, pilchards, and sardines. The report received indicates that the control of salmon prices has been working smoothly according to the plans. The trade is generally pleased that the regulations have interfered so little with the normal conduct of business.

THE CANADIAN FISHERIES ASSOCIATION COMPLETES ITS 24th YEAR

Information published in the Canadian Fisherman reveals that 25 years have elapsed since the Canadian Fisheries Association was founded. This Association has been active

during its entire existence, being given credit for invaluable services to all sections of the industry, including fishermen, producers, and distributers. Notable among its activities has been the successful campaign to create a full-time cabinet minister position for the Office of the Minister of Fisheries. It has also been largely responsible for the government-sponsored advertising campaign to promote an increased consumption of seafoods in Canada.

The inaugural meeting of the Association was held on February 15, 1915, at which time representatives from all sections of Canada met in Ottawa. The enthusiasm and whole-hearted support for this type of activity as displayed in the initial meeting has been amply justified through the results which the organization has attempted through the succeeding years, according to the review.

CANADA REQUIRES LICENSES FOR COD-LIVER OIL EXPORTS

Notice has recently been received by the Bureau of Foreign and Domestic Commerce of the issuance of an order from the Commissioner of Customs in Canada which prohibits exports of cod-liver oil from Canada either in crude or refined condition except under licenses approved by the Wartime Prices and Trade Board.

No cod livers or cod-liver oil will be accepted for shipment or released for export unless accompanied by a certificate of approval.

ENGLAND INVOKES FISH MEAL SALE REGULATIONS

Control of feedstuffs by the Government of the United Kingdom has been extended to sales of fish meal. The United Kingdom Ministry of Food has been designated as the sole importer of fish meal, and under the auspices of the Ministry a committee of United Kingdom fish meal importers has been formed from importers actively interested in this trade prior to the outbreak of the European conflict. Reports on this development have been published by the Canadian Commercial Intelligence Journal in its March 23 issue. The committee of importers considers offers at meetings held twice weekly. The operation of this new organization has suspended all direct sales of fish meal to firms in the United Kingdom.

MEATLESS DAYS IN FRANCE

Of interest to Americans is the enforcement of regulations in France limiting the consumption of meat in Paris and the Department of the Seine. The effect of these regulations has been described by the Office of the American Commercial Attache in Paris in a report to the Bureau of Foreign and Domestic Commerce.

Restrictive decrees have specified the numbers of dishes and quantities and varieties of food that may be served in restaurants. In this connection, not more than two dishes may be served to one person, and only one of these dishes may be meat. Besides these two dishes, the consumer may take a soup or one of four types of hors d'oeuvres, a fish, and a dessert.

Butcher shops in this area cannot sell on Mondays, butchers meat, pork-butchers meat, horse meat, or tripe-shop products. Butchers meat and pork-butchers meat cannot be sold on Tuesday, and on Wednesday no butchers meat can be sold. No restriction has been placed on the sale and consumption of poultry, rabbit, game, and lambs.

No mention was made of regulations affecting the sale of fish in these areas.

JAPANESE OBTAIN RECORD WHALE OIL PRODUCTION

A report issued by the Bureau of Foreign and Domestic Commerce states that the six Japanese Antarctic expeditions which have been operating in the December 1939 - March 1940 season have obtained a yield of 780,000 barrels of whale oil, compared with 484,000 barrels

obtained in the 1938-39 season. This is a 61 percent increase over the previous yield which had been the high production of Japan's Antarctic ventures inaugurated three years ago.

Norwegian reports disclose an estimated 909,000 barrels of whale oil produced by vessels of that nationality during the season just completed, which compares with a 1938-39 production of 722,000 barrels.

No reports have yet been received covering the results of British expeditions during the recent season.

The bulk of Japan's 1938-39 whale oil production was sold to England, but the first sale from the current catch was 307,000 barrels reportedly sold to Germany. Germany's boats, which produced 492,000 barrels in 1938-39, have not been operating during the past season. Japan ordinarily retains less than 10 percent of its total production as vegetable oil is preferred in that country, the whale oil being sold on world markets to provide exchange for the purchase of other products abroad. The 1938-39 production of whale oil by all countries totaled 2,813,000 barrels. The total weight of this production was slightly in excess of one billion pounds.

MALAY GOVERNMENT ENCOURAGES FISHING

The Malay Government has decided to provide a school of instruction for its native fishermen. This information is included in a report furnished the Bureau of Foreign and Domestic Commerce by its representative at Singapore. Young Malays, preferably sons of fishermen, will be selected for instruction in this school and they will be carefully trained to give them every advantage in carrying on the fisheries professions. Instructions will be given in navigation and the use of powered craft, construction and operation of nets and other fishing gear, refrigeration, handling, and marketing of fish, and other related subjects. Governmental assistance is also expected to include financial assistance in commercial operations upon completion of the training periods.

Definite steps have been taken by the Malay Government to limit the use of the major portion of the commercial fisheries to local fishermen. These steps have included the issuance of licenses to local fishermen only.

Figures issued by the Government Fisheries Department indicate that in 1938 there were about 197,000,000 pounds of fish landed in Malaya. The commercial fisheries are described as utilizing chiefly shad and mackerel. In the mackerel fishery powered boats are rapidly replacing those operated by sail. The mackerel catch is either salted or dried and its possibilities for distribution as fresh fish through the use of ice are just being explored. The large quantities of mackerel which are available to the fishermen have caused the government and commercial operators to become interested in the possibilities of enlarging refrigeration and icing facilities as well as installation of canning equipment. The fisheries of Malaya in 1938 were prosecuted by 26,564 fishermen, of which 13,763 were natives, 10,511 were Chinese, and 1,083 were Japanese. Fishing gear was operated from 10,491 fishing boats which utilized drift gill nets, seines, shrimp nets, traps, and lines.

RUMANIAN FISHERMEN OPERATE EXTENSIVE FISHERIES

Although Rumania is isolated from the fishing grounds of the open sea, it has fishery resources of considerable commercial importance which contribute to the needs of her populations for food. The Commercial Attache at Bucharest, Rumania, has recently submitted a report on these fisheries to the Bureau of Foreign and Domestic Commerce. Rumanian fishing is largely dependent upon fresh waters--mountain streams, rivers, and ponds for its harvests. The bulk of the water areas utilized is composed of the Danube River and its flood areas, while the Black Sea contributes a considerable area. Other miscellaneous waters throughout the country are also utilized.

The catch in pounds during 1938 is given in the following table by areas of production:

Fisheries of Rumania, 1938

Source	Quantity Pounds
The Danube and its flood area	54,186,000
The Black Sea with its adjoining lakes	6,600,000
Systematic pisciculture and dams	2,200,000
Large rivers (Pruth, Olt, Muresh and Somesh)	2,200,000
The Dniester and its flood area	1,100,000
Small rivers and dams	330,000
Mountain streams	66,000
Total	66,682,000

The Danube and its flood area extend over about 2,500,000 acres. Fishing is carried on through these waters during several months of the year. Rumania also utilizes other rivers totaling 37,260 miles in length as well as an area of 1,400,000 acres in lakes and ponds in commercial fishing operations. The flood areas of the Danube are reported as very favorable for fish production. Portions of these areas are used for agricultural purposes after retreat of flood waters. The value of the flood areas in fish production is recognized in national management and their use is balanced in the production of fish and agricultural products. A system of dikes is utilized in the control of flood waters in the operation of the Danube fisheries.

Rumanian fisheries on the Black Sea are operated along its 286 miles of shore line. Commercial species are taken in waters up to a depth of 500 feet in this inland sea. Here the species of most importance are sturgeon and trout. Because of a reported scarcity of fish and lack of trained fishermen, the fish production in the Black Sea is of minor importance when compared with the production in the Danube area. The waters of the Black Sea contain considerable quantities of salt.

Commercial fishing in mountain streams is carried on through the use of stocking stations and private hatcheries. These activities utilize trout primarily. Associations have been set up in river districts to handle the exploitation of these resources through concessions. Carp, perch, and pike are used in large quantities in these operations.

Of the Rumanian fishing domain about 80 percent is in the hands of the state. Fishing operations are carried on by local fishermen, apparently to a large extent casual. The state, by agreement, receives 5 percent of the fish taken out of the Black Sea, 30 to 50 percent of the fish taken from the deltas of the Danube, and 25 percent of other fish captured. Thirty percent of the caviar resulting from the fisheries is turned over to the state, also. In return for the shares received by the government, the fishermen are furnished with marketing facilities operated by state officials. The following table lists the area and production of state-owned and private waters.

Fish Production in Rumania in 1938

Owner	Area in Acres or Length in Miles	Pounds
State owned waters, exploited by autonomous regime	1,007,180 acres	40,750,000
State owned waters, exploited by lease	169,016 acres	8,560,000
Privately owned waters	222,390 acres	11,290,000
Canals, Danube, Dniester, etc., as well as the sea	6,047 miles	19,144,000

The value of the 1938 catch was stated to be about $4,000,000.

The Commercial Attache furnishing the report states that marketing of fish in Rumania is handicapped by lack of refrigerating facilities in the producing regions and that there is

a shortage of hatcheries. The area is described as being undeveloped in proportion to its size, needing improvement and development to reach a state of optimum production. In addition, measures are needed for the prevention of industrial pollution. The government is planning a program to support commercial fishing through providing refrigerators, hatching equipment, vessels, and fishing gear to individuals in the fishing profession. It is considered that the Rumanian fishing industries could be developed sufficiently to supply demands within the country for fish and also permit export of a considerable quantity of fishery products.

SOUTH AFRICAN PRODUCERS REPORT INCREASING FACILITIES FOR SHIPPING SPINY LOBSTER TAILS

The increasing import trade of South African spiny lobster tails is causing an increase in facilities available for transporting these products, according to a report received from the American Consulate in Cape Town and published in Foodstuffs Round the World. Special facilities for handling these frozen products are to be installed in two and possibly three vessels in the very near future, and three new vessels are now under construction for service in 1941, which will likewise furnish facilities for the purpose. Approximately four thousand cubic feet of refrigerated space is being provided in each of these vessels. Frozen spiny lobster tails are sent currently by way of South America except for shipments on one vessel which is enabled to maintain direct service because of suitable holding facilities for the frozen products. The six vessels being newly equipped for this trade will provide additional facilities for a direct line service employing seven ships.

South African producers export, chiefly from Cape Town, both frozen spiny lobster tails and canned spiny lobster meat. The latter is exported principally to France, Great Britain, and the United States in that order of importance.

MARINE-ANIMAL OILS CONTRIBUTE TO INDUSTRIAL PROCESSES

The Bureau of the Census reports that 222,000,000 pounds of fish oils and 58,500,000 pounds of whale oils were utilized in factory operations in the United States during 1939. The bulk of these oils was used for soap manufacture. A tabulation follows which shows details of factory consumption of these oils, with corresponding information for 1937 and 1938.

Factory Consumption of Marine-animal Oils
by Classes of Products, 1937-1939
(Shown in Thousands of Pounds)

Product	1939		1938		1937	
	Whale oil	Fish oil	Whale oil	Fish oil	Whale oil	Fish oil
Shortening	12	20,321	48	16,529	66	21,284
Soap	51,522	114,961	66,080	79,874	65,130	123,879
Paint and varnish	36	24,981	28	15,679	11	27,277
Linoleum and oil cloth	--	17,385	--	13,848	--	16,765
Printing inks	4	204	5	254	7	298
Miscellaneous	7,002	40,622	4,467	26,235	4,967	37,966
Loss including foots	74	3,532	36	987	15	1,608
Total	58,650	220,006	70,664	153,406	70,196	229,077

FROZEN FISH TRADE

United States Cold-storage Holdings Decline 26 Percent

Stocks of frozen fish held in United States cold-storage plants on April 15, 1940, totaled 34,736,000 pounds, according to figures furnished by the Agricultural Marketing Service of the Department of Agriculture. Information on these holdings has been published in Fisheries Statistical Bulletin No. 1378. These holdings compared with a stock of 29,776,000 pounds on hand on the same date a year ago and a 5-year average of 31,646,000 pounds, representing an increase of 17 percent above the holdings on April 15, 1939, and of 10 percent above the 5-year average. Principal items on hand included whiting, 2,536,000 pounds; salmon, 2,260,000 pounds; shrimp, 2,104,000 pounds; mackerel, 1,832,000 pounds; pollock fillets, 1,794,000 pounds; and whitefish, 1,701,000 pounds.

The quantity of fish frozen during the month ending April 15 amounted to 5,593,000 pounds, 19 percent below the production of frozen fish for the same period a year ago, and 26 percent below the 5-year average. There were 605,000 pounds of haddock fillets included in this total, and following in order were rosefish, 561,000 pounds; halibut, 559,000 pounds; shrimp, 558,000 pounds; and smelt, 385,000 pounds.

Inventories of cured herring in cold storage on April 15 totaled 15,753,000 pounds as compared with 15,670,000 pounds on April 15, 1939. Stocks of mild-cured salmon totaled 4,923,000 pounds as compared with 3,529,000 pounds on the corresponding date the previous year.

Cold-storage Stocks in Boston Continue to Decline

Reports from the Market News Service in Boston indicate that cold-storage holdings of frozen fishery products by Boston firms on the last Wednesday of April amounted to 3,737,000 pounds. This was a decrease of one and one-third million pounds of fish, or 26 percent, from the total of four weeks previous. The reduction in stocks was largely accounted for by a change from 1,249,000 pounds to 752,000 pounds in the stocks of pollock fillets, and from 908,000 pounds to 559,000 pounds in the holdings of small mackerel. The stocks of haddock fillets increased from 99,000 pounds to 204,000 pounds, while all other items remained at levels similar to those of the last Wednesday in March. Salt-water fish stocks dropped from 4,643,000 pounds to 3,485,000 pounds; fresh-water fish stocks were reduced from 5,000 pounds to 2,000 pounds; and supplies of shellfish, etc., were reduced from 393,000 pounds to 250,000 pounds. The most important items on hand on the last Wednesday in April were pollock fillets, small mackerel, and smelt.

When compared with the Boston cold-storage holdings of a year previous, the April totals represent an increase of 1 percent. A comparison by species shows decreases of haddock fillets from 656,000 pounds to 204,000 pounds; cod fillets from 619,000 pounds to 41,000 pounds; whiting, 541,000 pounds to 200,000 pounds; and swordfish, 338,000 pounds to 53,000 pounds. These decreases were largely offset by stock enlargements in pollock fillets from 138,000 pounds to 752,000 pounds, small mackerel from 38,000 pounds to 599,000 pounds, smelt from 261,000 pounds to 524,000 pounds, and squid from 59,000 pounds to 202,000 pounds. There was virtually no difference between the totals of salt-water fish, fresh-water fish, and shellfish and miscellaneous items on the last Wednesday in April 1940 and the totals on the corresponding date in 1939.

New York Cold-storage Holdings Decrease 11 Percent

In the 4-week period ending the last Thursday in April, New York cold-storage holdings of frozen fishery products declined 11 percent, from a total of 5,248,000 pounds to 4,651,000 pounds. Additional cold-storage data collected by the Market News Service indicate that of the latter total 2,257,000 pounds were salt-water species, 1,914,000 pounds were fresh-water species, and 480,000 pounds were composed of shellfish, etc. The principal change contributing to the decline was a decrease in the supply of whitefish on hand--from 974,000 pounds to 792,000 pounds. Whitefish, nevertheless, remained the most important item.

Among salt-water items, butterfish became of first importance, 268,000 pounds of this species being held. Shad retained a place of second importance with 259,000 pounds on hand, and chinook salmon with 245,000 pounds was third. Whitefish was of primary importance among fresh-water species, with sturgeon, at 665,000 pounds, second. Buffalofish and carp on hand totaled 226,000 pounds. Among shellfish, etc., spiny lobster tail stocks totaled 202,000 pounds and pulpi, 143,000 pounds. Shrimp declined from 122,000 pounds to 61,000 pounds in the four weeks ending April 25.

A comparison of the total of April 1940 with holdings on a corresponding date in 1939 discloses that stocks were 5 percent higher on the earlier date. The total of 4,903,000 pounds on hand on the 1939 date included 2,456,000 pounds of salt-water items, 1,594,000 pounds of fresh-water species, and 853,000 pounds of shellfish, etc. The chief differences in stocks of various items on the two dates include an increase of whitefish stocks from 414,000 pounds to 792,000 pounds, and of butterfish from 143,000 pounds to 268,000 pounds; and declines in Japanese swordfish, 450,000 pounds to 55,000 pounds, and shrimp, 506,000 pounds to 61,000 pounds.

Fish Stocks in Chicago Cold-storage Plants Drop 21 Percent

A drop of 21 percent occurred in the stocks of frozen fishery products in cold-storage plants in Chicago in the four weeks ending the last Thursday in April. Reports from the Fishery Market News Service office in Chicago show a total of 3,319,000 pounds of fishery products being held on April 25 compared with 4,182,000 pounds on March 28. The major decrease in separate items occurred in stocks of blue pike and sauger, which fell from 907,000 pounds to 654,000 pounds. Of the total holdings, fresh-water species accounted for 1,969,000 pounds, including 654,000 pounds of blue pike and sauger, 386,000 pounds of whitefish, and 298,000 pounds of lake trout. Salt-water items totaled 937,000 pounds, including 225,000 pounds of rosefish fillets. Shellfish, etc., including 152,000 pounds of shrimp, totaled 241,000 pounds, while unclassified items amounted to 173,000 pounds. The April 1940 figure also represented a decline from holdings on the corresponding date in 1939. On the earlier date 4,313,000 pounds of fishery products were being held. The decline was largely accounted for by lowered blue pike and sauger supplies--1,334,000 pounds in 1939 and 654,000 pounds in 1940. Lake trout, on the other hand, increased from 74,000 pounds in 1939 to 298,000 pounds in 1940. The quantities of other species being held in April 1940 were similar to those for which storage was being provided on the April 1939 date.

Canadian Cold-storage Fish Stocks Decrease Despite Increased Freezings

The Dominion Bureau of Statistics reports that Canadian cold-storage plants on May 1, 1940, held a total of 12,278,000 pounds of frozen fresh fishery products. This preliminary figure represented a decline of 12 percent from the stocks on hand on April 1, 1940, and a decrease of 25 percent from the total of May 1, 1939. Sea herring provided 3,015,000 pounds; whitefish, 1,381,000 pounds; and halibut, 1,322,000 pounds to the total.

Canadian cold-storage plants also held on May 1, 2,258,000 pounds of frozen smoked fishery products, including 1,510,000 pounds of smoked groundfish fillets and 364,000 pounds of finnan haddie. The total smoked products on hand represented an increase of 30 percent over the April 1, 1940, figure and a 9 percent rise from the total of May 1, 1939.

Fishery products frozen in April by these Canadian plants totaled 4,323,000 pounds as compared with 2,337,000 pounds frozen during the previous month and 2,918,000 pounds frozen in April 1939. The April 1940 total included 3,108,000 pounds of frozen fresh products, to which cod fillets contributed 1,623,000 pounds and frozen smoked products furnished 1,215,000 pounds, including 1,001,000 pounds of groundfish fillets.

United Kingdom Frozen Fish Trade Affected by War Conditions

A 9-page article on the present condition of the United Kingdom's frozen fish trade appears in the May 4 Commercial Intelligence Journal issued by the Canadian Department of

Trade and Commerce. Copies of this publication may be obtained through the King's Printer, Government Printing Office, Ottawa, Canada. This article reports that up to the present time the importation of frozen fish has not been placed under control by the United Kingdom Government. It states further that the capacity of the United Kingdom fishery fleet has been reduced by at least one half as a result of the Admiralty taking over a large number of vessels. The reduction of catch is not necessarily expected to result in a demand for a corresponding increase in imports because consumption has been reduced by a number of factors, an increase in price being the most outstanding. The falling off in sales has been heavy, primarily as a result of a shortage of fish and increased prices, and the "black-out" conditions are reported to keep people at home and away from restaurants and fried fish shops, which in normal times account for a distribution of a large part of the fish supplies.

"War brings commerce its problems as well as its opportunities, and transportation is not the least of the prevailing difficulties. In peace time Canadian exporters were unable to offer the cheaper fish, such as cod, to United Kingdom buyers because transatlantic shipping costs were too high. Now that war has changed prices in the United Kingdom to such a degree that the ocean shipping costs on Canadian fish can be covered, the problem has still not been solved, because the ocean refrigerated space is required for other commodities. The problem of shipping space is under consideration by the Governments and trade interests concerned."

Another factor affecting frozen fish trade is the problem of refrigeration space in the United Kingdom. This space is largely under government control and a major part of the total space available is in constant use for storing reserve supplies of essential foods; consequently, it is not feasible for any large reserve of frozen fish to be built up in the United Kingdom and cold-storage space for fish will be confined to that necessary for preserving supplies upon arrival and early distribution.

This article discusses, in general, the effects upon the fish trade of other factors, including transportation, control, exchange difficulty, and competition, and includes a statement of the pre-war position of the sea fishing industry of the United Kingdom.

CANNED FISH TRADE

Packers Hold 1¼ Million Cases of Salmon on April 30

The monthly statement issued by the Association of Pacific Fisheries on unsold canned salmon stocks showed a total of 1,250,000 standard cases of 48 one-pound cans in the hands of packers on April 30. This is only 5,000 cases less than the total on hand on April 30, 1939. Between March 31, 1940, and April 30, 1940, stocks were reduced by 120,000 cases.

Included in the April 30 total were 28,000 cases of chinook or king salmon, 133,000 cases of humpback or pink; 59,000 cases of silver or coho; 922,000 cases of Alaska red; 26,000 cases of Puget Sound sockeye, as well as several hundred cases of bluebacks and steelheads.

April Shrimp Pack Small

With the addition of only 11,000 standard cases of shrimp packed during April, the 1939-40 season's shrimp pack reached a total of 1,079,000 cases on April 27. In comparison, the 1938-39 season showed a pack of 1,007,000 cases through April 15, 1939. These figures include the production of 40 plants in the Gulf and South Atlantic States operating under the Seafood Inspection Service of the Food and Drug Administration.

California Sardine Pack Exceeds 3 Million Cases

With the season apparently ended the California pack of canned sardines has exceeded the production of 1939 by 22 percent. The March total of 92,000 cases packed raised the total of the season to 3,135,000 cases (48 one-pound cans). This information was received by the Bureau of Fisheries in a monthly statement by California's Division of Fish and Game.

The California pack for the current season includes 287,000 cases produced in the San Francisco district; 1,763,000 cases in the Monterey district; and 1,085,000 cases canned in the Southern California district.

1940 Tuna Pack Leads 1939 Production

The California tuna pack for the first quarter of 1940 amounted to 490,000 cases of 48 one-half pound cans, according to data reported in the preliminary release of the California Division of Fish and Game. The pack for the first three months of 1939 amounted to 425,000 cases. The 1940 pack so far exceeds that of last year by 15 percent. Of the several varieties of tuna processed, yellowfin leads, this commodity contributing 84 percent of the total pack. Next in order were striped tuna (skipjack); tuna flakes; bonito; tuna, tonno style; bluefin; and yellowtail. Eighty-two percent of the tuna pack was canned in the San Diego district.

Current Mackerel Pack 136 Percent Higher than 1939

A total of 345,000 standard cases (48 one-pound cans) of mackerel was produced in California during the 3-month period from January through March 1940, an increase of 136 percent when compared with the pack of 146,000 cases for the same period of 1939. This information is based on a preliminary statement issued by the State of California's Division of Fish and Game. Ninety-eight percent of the mackerel output was canned in the San Pedro district.

FOREIGN FISHERY TRADE

United States Foreign Trade Activity in Fishery Products Diminishes

From the abnormally high totals in January and February the United States' foreign trade movements in edible fishery commodities fell in March to a comparatively low level. Statistics furnished by the Bureau of Foreign and Domestic Commerce show a total of 32,984,000 pounds of these commodities in combined imports and exports--compared with totals of 56,088,000 pounds for January and 49,259,000 pounds for February. Lowered imports and exports both contributed to the reductions.

March imports totaled 20,694,000 pounds, a decrease of 34 percent from both the February 1940 and March 1939 figures. Included in the total were fresh and frozen fresh-water fish, 5,313,000 pounds; pickled and salted cod, haddock, hake, etc., 2,752,000 pounds; pickled and salted herring, 2,242,000 pounds; canned sardines, 1,216,000 pounds; lobsters, not canned, 574,000 pounds; canned crab, 230,000 pounds; and canned tuna, 219,000 pounds. All of these items registered decreases from the February totals.

The imports total for the first three months of 1940 was 90,645,000 pounds compared with 95,178,000 pounds imported during the first three months in 1939. Fresh-water fish and eels, fresh or frozen, totaled 19,033,000 pounds, compared with 18,843,000 pounds for the three months of 1939; pickled or salted herring totaled 13,888,000 pounds compared with 13,308,000 pounds; pickled or salted cod, haddock, hake, etc., 10,476,000 pounds, compared with 12,913,000 pounds; canned crab meat, 8,938,000 pounds, compared with 3,001,000 pounds; canned sardines, 4,123,000 pounds, compared with 6,644,000 pounds; and canned tuna, 3,439,000 pounds, compared with 2,183,000 pounds.

Exports of edible fishery commodities totaled 12,290,000 pounds in March. Included were 9,660,000 pounds of canned sardines, 1,000,000 pounds of canned salmon, and 192,000 pounds of canned shrimp. The 3-month totals for these three products were 31,638,000 pounds, 10,539,000 pounds, and 735,000 pounds in respective order, compared with 16,130,000 pounds, 13,331,000 pounds, and 1,521,000 pounds for the first three months of 1939. The total exports for March were 32 percent below the February total and 11 percent less than the March 1939 exports. For the first three months of 1940 total exports were 47,686,000 pounds compared with 38,368,000 pounds for the period January-March 1939.

United States Imports Fish Worth 32 Million Dollars

Fish and fishery products provided 1.4 percent of the total United States imports in 1939, according to the April 30 issue of Domestic Commerce. Fish stood fifteenth in importance among all items and was led by only two other food classifications--those of coffee and cane sugar. The worth of the fish imports was placed at $32,404,000. Cattle, valued at $21,147,000, was listed at 22nd place in the list and constituted 0.9 percent of the total imports.

Britain Imports Large Quantities of Canned Salmon and Sardines

The April 5 issue of Foodstuffs Round the World states that both canned salmon and sardines moved in large quantities to the English market during February 1940 as compared with both the previous month and February of 1939. There were 120,000 cases of canned salmon shipped to England during February 1940, representing a 135 percent increase over the 51,000 cases shipped in February 1939 to that country. Sardine exports for February 1940 included 116,000 cases destined for England, compared with 17,000 cases shipped during the corresponding month of the previous year. These exports made up the bulk of the shipments of these products from the United States during February.

Newfoundland Salt Codfish Exports Decrease in 1939

A recent report from the American Consulate General in Newfoundland discloses that salt codfish exports from that country for 1939 totaled 210,000,000 pounds. This was a decline from 250,000,000 pounds exported in 1938. Puerto Rico was the leading recipient of this product during both years, obtaining almost 38,500,000 pounds in 1939. Other countries receiving large quantities of this salt fish included Brazil, Italy, Jamaica, and Portugal.

THE COVER PAGE

The fur-seal herds of the Pribilof Islands, administered by the Bureau of Fisheries, contain more than two million animals. The feature article on Fur Seals in this issue covers the history of depletion and rehabilitation of these valuable resources.

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NOTICE

The Superintendent of Documents has notified the Bureau of the availability of the following pamphlets in addition to those appearing on the final page of this publication:

Economic Circular #58, "Oysters: An Important Health Food" (98 ways to cook oysters), 5¢.
Economic Circular #48, "Canned Salmon: Pink and Chum" (44 recipes), 5¢.
Fisheries Document #1075, "Net Preservative Treatments", 5¢.

Orders for these pamphlets should be forwarded direct to the Superintendent of Documents, Government Printing Office, Washington, D. C., and not to the Bureau of Fisheries.

FISHERY TRADE INDICATORS
(Expressed in Thousands of Pounds)

Item	Month	Latest month	Same month a year ago	Previous month
FRESH FISH LANDINGS				
Boston, Mass.	March	19,203	26,712	22,043
Gloucester, Mass.	do	3,662	2,299	3,921
Portland, Me.	do	1,223	746	1,180
Boston, Gloucester, and Portland:				
Cod	do	5,698	6,659	5,405
Haddock	do	10,158	14,364	10,764
Pollock	do	1,132	1,621	1,619
Rosefish	do	4,464	3,812	5,765
FISH RECEIPTS, CHICAGO 1/				
Salt-water fish	do	1,214	982	1,615
Fresh-water fish	do	3,087	2,965	2,929
Shellfish, etc.	do	738	285	662
By truck	do	1,851	1,049	1,536
By express	do	922	646	1,115
By freight	do	2,265	2,538	2,556
COLD-STORAGE HOLDINGS 2/				
New York, N. Y.:				
Salt-water fish	April	2,257	2,456	2,592
Fresh-water fish	do	1,914	1,594	2,101
Shellfish, etc.	do	460	853	556
Boston, Mass.:				
Salt-water fish	do	3,485	3,492	4,643
Fresh-water fish	do	2	10	5
Shellfish, etc.	do	250	194	393
Chicago, Ill.:				
Salt-water fish	do	937	1,122	1,100
Fresh-water fish	do	1,969	2,677	2,555
Shellfish, etc.	do	241	291	372
Unclassified	do	173	224	155
United States:				
Cod fillets	do	456	696	724
Haddock fillets	do	1,069	1,404	1,728
Mackerel	do	1,832	656	2,976
Pollock fillets	do	1,794	332	2,910
Rosefish fillets	do	1,447	535	2,394
Salmon	do	2,260	3,052	2,976
Whiting	do	2,536	2,342	3,798
Shrimp	do	2,104	3,542	1,904
New England, all species	do	8,398	5,093	13,372
Middle Atlantic, all species	do	7,595	7,178	9,873
South Atlantic, all species	do	1,379	1,373	2,453
North Central East, all species	do	8,011	6,631	9,406
North Central West, all species	do	1,918	2,401	2,803
South Central, all species	do	763	847	930
Pacific, all species	do	6,672	6,233	6,728
FOREIGN FISHERY TRADE 3/				
Exports:				
All edible fishery commodities	March	12,290	13,810	18,144
Canned salmon	do	1,000	5,302	6,065
Canned sardines	do	9,660	5,108	10,238
Canned shrimp	do	192	672	426
Imports:				
All edible fishery commodities	do	20,694	31,201	31,115
Fresh-water fish and eels, fresh or frozen	do	5,313	6,081	6,294
Canned tuna	do	219	970	938
Canned sardines	do	1,215	2,041	1,889
Cod, haddock, hake, etc., pickled or salted	do	2,758	3,117	4,750
Herring, pickled or salted	do	2,242	3,980	4,628
Crab meat, sauce, etc.	do	230	1,053	1,828
Lobsters, not canned	do	574	897	752
Lobsters, canned	do	76	33	60

1/ Includes all arrivals as reported by express and rail terminals, and truck receipts as reported by wholesale dealers, including smokers.

2/ Data for individual cities are as of the last Thursday of the month, except those at Boston which are for the last Wednesday of the month, and those for geographical areas and the total of the United States which are as of the 15th of the month.

3/ From data compiled by the Bureau of Foreign and Domestic Commerce.

Note.--Data for the latest month are subject to revision.

PRINCIPAL FIELD OFFICES AND LABORATORIES OF THE U. S. BUREAU OF FISHERIES

Division of Fishery Industries

Boston, Mass.	B. E. Lindgren.....	253½ Northern Ave. Market News Service.....
Chicago, Ill.	E. C. Hinsdale.....	200 N. Jefferson St. Market News Service.....
College Park, Md.	J. M. Lemon.....	Horticultural Bldg., U. of Md. Fish. Tech. Laboratory....
Jacksonville, Fla.	S. C. Denham.....	309 Duval Bldg. Market News Service.....
New Orleans, La.	C. E. Peterson.....	1100 Decatur St. Market News Service.....
New York, N. Y.	W. H. Dumont.....	33-A Fulton St. Market News Service.....
San Pedro, Calif.	C. B. Tendick.....	Post Office Bldg. Fishery Statistics.....
Seattle, Wash.	V. J. Samson.....	421 Bell St. Terminal. Market News Service.....
Seattle, Wash.	R. W. Harrison.....	2725 Montlake Blvd. Fisheries Tech. Laboratory.....

Division of Fish Culture

LaCrosse, Wis.	C. F. Culler.....	Regional Headquarters.....
Seattle, Wash.	F. J. Foster.....	2725 Montlake Blvd. Regional Headquarters.....

Division of Scientific Inquiry

Ann Arbor, Mich.	Dr. John Van Oosten.....	University Museums. Great Lakes Fish. Investigations
Beaufort, N. C.	Dr. Herbert F. Prytherch...	Fisheries Biological Laboratory.....
Cambridge, Mass.	W. C. Herrington.....	Room A-210 Harvard Biol. Lab. N.At.Fish. Investigations.
College Park, Md.	Robert A. Nesbit.....	Horticultural Bldg., U. of Md. Mid. & S. At. Fish. Invest.
Columbia, Mo.	Dr. M. M. Ellis.....	101 Willis Ave. Interior Waters Investigations.....
Milford, Conn.	Dr. Victor Loosanoff.....	Fish. Laboratory. New England Oyster Investigations
New Orleans, La.	M. J. Lindner.....	336 Chartres St. Gulf Shrimp Investigations.....
Pensacola, Fla.	Dr. A. E. Hopkins.....	Box 1826. Gulf Oyster Investigations.....
Seattle, Wash.	Dr. F. A. Davidson.....	2725 Montlake Blvd. Fisheries Biological Laboratory.
Stanford University, Calif.	O. E. Sette.....	Room 450-B Jordan Hall. Pilchard investigations.....

Division of Alaska Fisheries

Seattle, Wash.	C. L. Olson.....	706 Federal Bldg. Alaska Fisheries Service.....

FISHERY INDUSTRIAL AND MARKETING PUBLICATIONS

There follows a list of some of the industrial or marketing publications of the Bureau of Fisheries, which are available for purchase from the Superintendent of Documents, Government Printing Office, Washington, D. C., at the prices quoted. Price list 21, the most complete list of Bureau sales publications, may be obtained from the Superintendent of Documents, free of charge.

INVESTIGATIONAL REPORTS

No. 43. Some Effects of Ultraviolet Irradiation of Haddock Fillets. 1939. 5¢.
No. 42. A Plan for the Development of the Hawaiian Fisheries. 1939. 10¢.
No. 41. The Mineral Content of the Edible Portions of Some American Fishery Products. 1938. 5¢.
No. 40. Pacific Salmon Oils. 1939. 5¢.
No. 39. Trade in Fresh and Frozen Fishery Products and Related Marketing Considerations in the San Francisco Bay Area. 1938. 10¢.
No. 38. Marketing of Shad on the Atlantic Coast. 1938. 10¢.
No. 37. Preliminary Report on the Cause of the Decline of the Oyster Industry of the York River, Va., and the Effects of Pulp-mill Pollution on Oysters. 1938. 10¢.
No. 32. Studies on Drying Cod and Haddock Waste. 1935. 5¢.
No. 30. Effect of Manufacture on the Quality of Noncily Fish Meals. 1935. 5¢.
No. 28. Studies on the Utilization of Swordfish Livers. 1935. 5¢.
No. 26. Fishery for Red Snappers and Groupers in the Gulf of Mexico. 1935. 5¢.
No. 25. The Iodine Content of Some American Fishery Products. 1935. 5¢.
No. 24. Modifications in Gear Curtail the Destruction of Undersized Fish in Otter Trawling. 1935. 5¢.
No. 21. Shrimp Industry of the South Atlantic and Gulf States. 1934. 10¢.
No. 20. Studies on the Smoking of Haddock. 1934. 5¢.
No. 18. The Iodine Content of Oysters. 1934. 5¢.
No. 16. Developments in Refrigeration of Fish in the United States. 1932. 5¢.
No. 14. Fisheries of the Virgin Islands of the United States. 1932. 5¢.
No. 13. Fisheries of Puerto Rico. 1932. 5¢.
No. 7. Market for Marine Animal Oils in the United States. 1931. 15¢.
No. 1. Menhaden Industry. 1931. 25¢.

FISHERY CIRCULARS

No. 25. Natural History and Methods of Controlling the Common Oyster Drills. 1937. 5¢.
No. 23. Decline in Haddock Abundance on Georges Bank and a Practical Remedy. 1936. 5¢.
No. 22. Organizing and Incorporating Fishery Cooperative Marketing Associations. 1936. 5¢.
No. 21. The Story of Oysters. 1936. 5¢.
No. 19. Practical Fish Cookery. 1935. 5¢.
No. 18. Conditions Affecting the Southern Winter Trawl Fishery. 1935. 5¢.
No. 15. Aquatic Shell Industries. 1934. 5¢.
No. 12. Introduction of Japanese Oysters into the United States. 1932. 5¢.
No. 11. Some Unusual Markets for Fish and Shellfish. 1932. 5¢.
No. 3. Market for Fresh Oysters in 14 Cities of the United States. 1931. 10¢.

ECONOMIC CIRCULARS

No. 74. Application of Preservatives to Fishing Nets. 1931. 5¢.
No. 69. Salmon--an Economical and Valuable Food. 1929. 10¢.

DOCUMENTS

No. 1092. Pacific Salmon Fisheries. 1930. 65¢.
No. 1078. Utilization of Shrimp Waste. 1930. 10¢.
No. 1075. Net Preservative Treatments. 1930. 5¢.
No. 1065. Bibliography on Cod-liver Oil in Animal Feeding. 1929. 10¢.
No. 1059. Fishing Grounds of the Gulf of Maine. 1929. 25¢.

ADMINISTRATIVE REPORTS

No. 35. Progress in Biological Inquiries, 1938. 15¢.
No. 34. Propagation and Distribution of Food Fishes, Fiscal Year 1938. 10¢.
No. 32. Fishery Industries of the United States, 1937. 25¢.
No. 31. Alaska Fishery and Fur-seal Industries in 1937. 15¢.

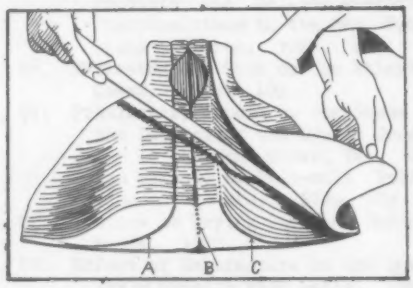
ORDERS FOR THE ABOVE-LISTED PUBLICATIONS SHOULD BE FORWARDED DIRECT TO THE SUPERINTENDENT OF DOCUMENTS, GOVERNMENT PRINTING OFFICE, WASHINGTON, D. C., AND NOT TO THE BUREAU OF FISHERIES

MARKETING OF SHAD ON THE ATLANTIC COAST

INVESTIGATIONAL REPORT NO. 38

The season for shad has already started in the South Atlantic States. They will be at their peak of abundance in more northern States shortly. Consequently, the Bureau of Fisheries calls to your attention the publication entitled "Marketing of Shad on the Atlantic Coast", by Fred F. Johnson of the Bureau's staff.

The report includes the findings of a consumer survey covering eight cities from Washington, D. C., to Charleston, S. C. This survey dealt not only with shad but fish in general and brought out the following facts, among others, concerning dietary habits of the families surveyed:



Boning shad operation No. 1

1. The average family serves an average of 51 seafood meals at home annually.

2. The average family eats 6 seafood meals at public eating houses each year.

3. The average 2-person family purchases 1.7 pounds of dressed seafood per meal; a 3-person family, 2.2 pounds; a 4-person family, 2.4 pounds; and a 5-person family, 2.8 pounds.

4. Nearly 50 percent of the 2-person families surveyed in Washington, D. C., and Richmond and Newport News, Va., purchase one pound of dressed seafood or less per meal.

5. Nearly 38 percent of the 3-person families surveyed in the same cities purchase one and one-half pounds of dressed seafood or less per meal.

The small size of the average purchases of fish by small families is most significant in view of the fact that 44 percent of this country's families consist of those of two and three persons.

Boning shad operation No. 2

In addition to discussions of the shad fishery and trade in shad products, the report includes tested recipes for preparing shad and shad roe, and describes a method for boning shad, two illustrations of which appear above.

This report may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., for 10 cents, by requesting Fisheries Investigational Report No. 38.